plantuml in orgmode

drawing in plain text

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Introduction

PlantUML in Orgmode

This file demostrates:

- How to draw in UML with plantuml in orgmode
- And create PDF slides from orgmode

Emacs and Orgmode version

Firstly, let's check Emacs[1] and Orgmode[2] version:

```
(concat (emacs-version)
        "\nOrgmode " (org-version))
```

```
GNU Emacs 28.0.50 (build 7, x86_64-w64-mingw32)
 of 2021-07-15
Orgmode 9.4.4
```

---

[1] https://www.gnu.org/software/emacs

[2] https://orgmode.org

Emacs Configuration

You may need to use my emacs config:

```
# backup existing emacs config
cd ~ && mv .emacs .emacs-backup && mv .emacs.d .emacs.d-backup
# clone this config
git clone https://github.com/kimim/kimim-emacs
# copy default .emacs to ~
cp kimim-emacs/.emacs ~
```

PlantUML

Download plantuml.jar[3], and set jar-path:

```
(require 'url-handlers)
(require 'ob-plantuml)
(url-copy-file "https://nchc.dl.sourceforge.net/project/plantuml/plantuml.jar"
               "./plantuml.jar" t)
(setq org-plantuml-jar-path "./plantuml.jar")
```

---

[3] https://plantuml.com

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TexLive and Beamer Theme

Install TexLive[4] to `<texlive-path>` and clone beamertheme-kimim[5], and update TEX cache:

```
git clone https://github.com/kimim/beamertheme-kimim \
    <texlive-path>/texmf-local/tex/latex/beamertheme-kimim
mktexlsr
```

---

[4]`http://tug.org/texlive`

[5]`https://github.com/kimim/beamertheme-kimim`

Inkscape

Install Inkscape[6] to convert SVG image to PDF.

This is inkscape version on my Windows 10:

```
inkscape --version
```

```
Inkscape 1.0.2-2 (e86c870879, 2021-01-15)
```

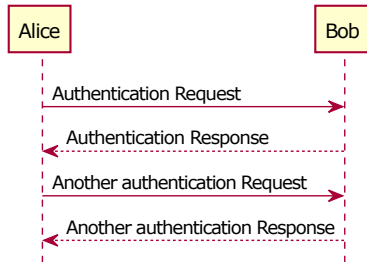[6]https://inkscape.org

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PlantUML Diagrams

Sequence Diagram

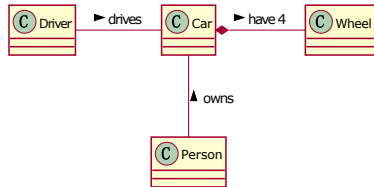Let's draw a simple sequence diagram with this plantuml code:

```
@startuml
hide footbox
hide unlinked
Alice -> Bob: Authentication Request
Bob --> Alice: Authentication Response
Alice -> Bob: Another authentication Request
Alice <-- Bob: Another authentication Response
@enduml
```

Class Diagram

A simple class diagram

```
@startuml
class Car
Driver - Car : drives >
Car *- Wheel : have 4 >
Car -- Person : < owns
@enduml
```

Conclusion

Key Takeaways

- Emacs is a long lasting, and wonderful text editor
- Orgmode is an awesome plain text format
- $\LaTeX$ and Beamer is great typesetting tool
- Thus, drawing plantuml diagram with these tools is cool!

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